UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
DUONG, FRANK

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
	10/090,424	JORMANAINEN ET AL.
Office Action Summary	**Examiner**	**Art Unit**	
	Frank Duong	2616	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2006*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/1/02* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to communications dated 01/13/06. Claims 1-28 are pending in the application.

Claim Objections

2. Claims 16-17 are is objected to because of the following informalities:

As per claim 16, line 2, the term "adapted to" should be changed to --configured to--.

As per claim 17, line 3, the term "adapted to" should be changed to --configured to--.

A typical reason for doing so is that such term or claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. See MPEP § 2111.049 [R.3].

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-11, 13-18, 21-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by McTiffin (EP 0,679,042).

Regarding **claim 1**, in accordance with McTiffin reference entirety, McTiffin

discloses method for performing switching between an incoming side and an outgoing

side of a switching network element (*Fig. 4*) in a telecommunication network (Fig. 3),

said method comprising the steps of:

a) allocating technology-independent identifications (*unique VCI and VPI*) to a

call resource of said switching network element (*MNIU*), request by a received call (*col.

3, lines 22-24 and thereinafter*);

b) defining an incoming logical leg (*VPI$_A$/VCIX or VPI$_B$/VCIX*) and an outgoing

logical leg (*VPI$_P$/VCIQ*) for said received call by using said allocated identifications for

said incoming side and said outgoing side, respectively (*col. 3, lines 30-37 or col. 4,

lines 26-58 and thereinafter*), and

c) controlling said switching network element for said received call based on said

incoming logical leg and said outgoing logical leg (*col. 4, lines 31-34, the functions of

circuit 22 is discussed*).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales

discussed above), McTiffin further discloses wherein said call resources **_comprise at_**

least one of a transcoding service, a **_macro diversity combining service_**, an AAL2

switching service, a tone generating service, an echo canceling service, a compression

service and a conference call service (*col. 4, line 49 and thereinafter*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales

discussed above), McTiffin further discloses wherein a plurality of incoming logical legs

($VPI_A/VCIX$ and VPI_B/VCI_X) are simultaneously defined for a through connection to an

outgoing logical leg (VPI_P/VCI_Q) (*see Fig. 4*).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales

discussed above), McTiffin further discloses wherein said incoming logical leg and/or

said outgoing logical leg comprise a plurality of subconnections needed for a whole

through-connection between said incoming side and said outgoing side (*see Fig. 4 for*

connection details of incoming and outgoing logical connections).

Regarding **claim 5**, in addition to features recited in base claim 4 (see rationales

discussed above), McTiffin further discloses wherein said plurality of subconnections

depend on services requested by said received call (*col. 3, lines 22-24 and*

thereinafter).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales

discussed above), McTiffin further discloses wherein a reservation of service resources

and a cross-connection handling between service points is controlled on the basis of

said incoming and outgoing logical legs (*subnetwork interfaces for enabling*

macrodiversity are discussed at col. 5, lines 12-24 and thereinafter).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales

discussed above), McTiffin further discloses wherein resources are reserved with the

same traffic parameters as reserved for a previous service in a service chain of a logical

leg (*see Fig. 6 and its corresponding description at col. 6, line 42 to col. 7, line 46*).

Regarding **claim 8**, in addition to features recited in base claim 4 (see rationales

discussed above), McTiffin further discloses wherein said plurality of subconnections

comprise an AAL2 connection **_and/or_** an ATM connection (*Fig. 4 or 6 depicted ATM connection (VPI/VCI)*).

Regarding **claim 9**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein a signal processing resource for providing service functions is managed based on said incoming and outgoing logical legs (*Fig. 4; ATM switch 14 or 15*).

Regarding **claim 10**, in addition to features recited in base claim 1 (see rationales discussed above), McTiffin further discloses wherein data of said incoming and outgoing logical legs is stored in a memory (*Fig. 4; buffers 18 and 20*).

Regarding **claim 11**, in addition to features recited in base claim 10 (see rationales discussed above), McTiffin further discloses wherein a leg identification information is permanently stored and a leg is created in a start-up phase according to the defined services (*col. 3, lines 38-46*).

Regarding **claim 13**, in addition to features recited in base claim 10 (see rationales discussed above), McTiffin further discloses wherein said incoming and outgoing logical legs are refreshed based on a refresh request (*col. 7, lines 18-30*).

Regarding **claim 14**, in accordance with McTiffin reference entirety, McTiffin shows switching network element (Fig. 4) for performing switching between an incoming side (*Fig. 4; From Access Network*) thereof and an outgoing side (*Fig. 4; To Fixed Network*) thereof in a telecommunication network (*Fig. 3*), said switching network element (*Fig. 4*) comprising:

a) logical resource interface means (*MNIU*) for allocating a technology-

independent identification (*unique VCI and VPI*) to a call resource requested by a

received call (*col. 3, lines 22-24 and thereinafter*); and

b) control means (*ATM switch 14 and 16*) for controlling a switching operation of

said switching network element on the basis of an incoming logical leg (*VPI$_A$/VCIX or*

VPI$_B$/VCIX) and an outgoing logical leg (*VPI$_P$/VCIQ*) defined by the identifications

allocated by said logical resource interface means to requested cell resources at said

incoming side and said outgoing side, respectively (*col. 3, lines 30-37 or col. 4, lines 26-*

58 and thereinafter).

Regarding **claim 15**, in addition to features recited in base claim 14 (see

rationales discussed above), McTiffin further shows memory means (*Fig. 4; buffer pair*

18 and 20) for storing data of said incoming and outgoing logical legs (*col. 4, lines 29-*

31).

Regarding **claim 16**, in addition to features recited in base claim 14 (see

rationales discussed above), McTiffin further discloses wherein said control means are

configured to mark and store a registration information of a leg to a client who created

the leg (*col. 3, lines 10-13*).

Regarding **claim 17**, in addition to features recited in base claim 16 (see

rationales discussed above), McTiffin further discloses wherein said control means is

configured to perform control such that only the registrated owner of a leg is allowed to

request operations concerning this particular leg (*col. 3, lines 10-13*).

Regarding **claim 18**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses connection control means for controlling a switching means in response to an output of said control means (*not shown; inherently there is some sort of controlling mechanism or connection control (CAC) in an ATM switch (14 and 16)*).

Regarding **claim 21**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses further comprising signal processing control means for controlling an allocation of signal processing resources to service functions based on an output of said control means (*Fig. 4; ATM switch 14 or 15*).

Regarding **claim 22**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said service functions comprise **_at least one of_** transcoding, tone generation, echo canceling, compression, announcements, conference call services and *macro diversity combining services* (*col. 4, line 49 and thereinafter*).

Regarding **claim 23**, in addition to features recited in base claim 14 (see rationales discussed above), McTiffin further discloses wherein said control means is arranged to determine necessary subconnection end points based on services required for said incoming and outgoing side according to said received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5, lines 12-24 and thereinafter*).

Regarding **claim 24**, in addition to features recited in base claim 19 (see

rationales discussed above), McTiffin further discloses wherein said ATM connection

control means is arranged to supply subconnection end points to said control means

based on requested services required for said incoming and outgoing side according to

said received call (*subnetwork interfaces for enabling macrodiversity are discussed at*

col. 5, lines 12-24 and thereinafter).

Regarding **claim 25**, in addition to features recited in base claim 21 (see

rationales discussed above), McTiffin further discloses wherein said control means is

arranged to use said signal processing resource control means in order to request

service end points for transcoding *or macro diversity services* needed for said

received call (*subnetwork interfaces for enabling macrodiversity are discussed at col. 5,*

lines 12-24 and thereinafter).

Regarding **claim 26**, in addition to features recited in base claim 21 (see

rationales discussed above), McTiffin further discloses wherein said processing

resource control means is arranged to reserve resources with same traffic parameters

as were received for a previous service in the service chain of a logical leg (*see Fig. 6*

and its corresponding description at col. 6, line 42 to col. 7, line 46).

Regarding **claim 28**, in addition to features recited in base claim 14 (see

rationales discussed above), McTiffin further discloses wherein said switching element

is a radio network controller or an interworking network element of a third generation

mobile network (*Fig. 4*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 12, 19-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable

over McTiffin in view of Boldt et al (Modeling an ATM-Based Access Network for 3rd

Generation Mobile Communication Networks, IEEE, pages 2590-2593, 1998)

(hereinafter "Boldt").

In addition to features recited in base claims 1 and 14, McTiffin fails to further

discloses the applying of AAL2 service or AAL2 connection control means. However,

such limitation lacks thereof from McTiffin's teaching is well known and disclosed by

Boldt.

In an analogous art, Boldt teaches an ATM switch extended to AAL2 switching

(Figure 5 or 8), comprising, among other things, the limitation of applying of AAL2

service or AAL2 connection control means (*page 2593, left column, address mapping*

between AAL2 channel identifier and ATM VCI/VPIs) to achieve higher efficiency as

well as coping with delay sensitive services (*Boldt, page 2590, right column, second*

paragraph).

Thus, it would have been obvious to those skilled in the art at the time of the

invention to implement Boldt's teaching into McTiffin's method and system to arrive the

claimed invention with a motivation to achieve higher efficiency as well as coping with

delay sensitive services (*Boldt, page 2590, right column, second paragraph*).

Response to Arguments

5. Applicant's arguments with respect to claims 1-28 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Frank Duong whose telephone number is 571-272-

3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FRANK DUONG
PRIMARY EXAMINER

July 5, 2006